

WHAT IS CLAIMED IS:

1. A multichip module comprising:

a substrate having a first conductive pad, a second conductive pad and a third conductive pad disposed on a major surface thereof;

5 a conductive element, said conductive element including a web portion and a connector extending from a first major surface of said web portion;

a first semiconductor die and a second semiconductor die, each semiconductor die having a first contact of a first designation disposed on a first major surface thereof and a second contact of a second designation
10 disposed on a second opposing major surface thereof;

wherein said first contact of said first semiconductor die is electrically connected to said first conductive pad, said second contact of said second semiconductor die is connected to said second conductive pad, said connector is connected to said third conductive pad, and said second contact of
15 said first semiconductor die and said first contact of said second semiconductor die are connected to said first major surface of said web portion.

2. A multichip module according to claim 1, wherein said substrate is one of an insulated metal substrate, double bonded copper and a lead frame structure.

3. A multichip module according to claim 1, wherein said semiconductor die are MOSFETs, said first contacts of which are source contacts and said second contacts of which are drain contacts.

4. A multichip module according to claim 1, wherein each of said semiconductor die is one of MOSFET and IGBT.

5. A multichip module according to claim 1, further comprising a molded housing.

6. A multichip module according to claim 5, wherein said conductive element is at least partially exposed through said molded housing to dissipate heat from said semiconductor die.

7. A multichip module according to claim 1, wherein said web portion includes two free ends, and said connector is disposed at one end of said web portion.

8. A multichip module according to claim 1, wherein said web portion includes two free ends, said connector is disposed between said two free ends.

9. A multichip module according to claim 1, wherein said element is L-shaped.

10. A multichip module according to claim 1, wherein said element is T-shaped.

11. A multichip module according to claim 1, further comprising a heat sink in thermal contact with said substrate.

12. A multichip module according to claim 1, further comprising a heat sink in thermal communication with said element.

13. A multichip module according to claim 1, wherein said web portion includes a plurality of ridges extending from a second major surface of said web portion.

14. A multichip module according to claim 1, wherein said web portion includes a recess at each opposing end thereof.

15. A multichip module according to claim 1, wherein said web portion includes a recess at one end thereof.

16. A multichip module according to claim 1, wherein said connector is a ball contact.

17. A multichip module according to claim 1, wherein said element includes another ball contact, each of said ball contacts being disposed at a respective end of said web portion.

18. A multichip module comprising:

a substrate having a first conductive pad, a second conductive pad and a third conductive pad disposed on a major surface thereof;

5 a conductive element, said conductive element including a web portion and a connector extending from a first major surface of said web portion;

a first MOSFET and a second MOSFET, each MOSFET having a source contact disposed on a first major surface thereof and a drain contact on a second opposing major surface thereof;

10 wherein said source contact of said first semiconductor die is electrically connected to said first conductive pad, said drain contact of said second semiconductor die is connected to said second conductive pad, said connector is connected to said third conductive pad, and said drain contact of said first semiconductor die and said source contact of said second
15 semiconductor die are connected to said first major surface of said web portion.

19. A multichip module according to claim 18, wherein said substrate is one of an insulated metal substrate and double bonded copper.

20. A multichip module according to claim 18, further comprising a molded housing.

21. A multichip module according to claim 18, wherein said web portion includes two free ends, and said connector is disposed at one end of said web portion.

22. A multichip module according to claim 18, wherein said web portion includes two free ends, said connector is disposed between said two free ends.

23. A multichip module according to claim 18, wherein said element is L-shaped.

24. A multichip module according to claim 18, wherein said element is T-shaped.

25. A multichip module according to claim 18, further comprising a heat sink in thermal contact with said substrate.

26. A multichip module according to claim 18, further comprising a heat sink in thermal communication with said element.

27. A multichip module according to claim 18, wherein said web portion includes a plurality of ridges extending from a second major surface of said web portion.

28. A multichip module according to claim 18, wherein said web portion includes a recess at each opposing end thereof.

29. A multichip module according to claim 18, wherein said web portion includes a recess at one end thereof.

30. A multichip module according to claim 18, wherein said connector is a ball contact.

31. A multichip module according to claim 30, wherein said element includes another ball contact, each of said ball contacts being disposed at a respective end of said web portion.